CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-12-05-03** **Date: 08-12-17**
Customer	:	Assistant Executive Engineer, Project Division, BBMP, Bangalore.
Address	:	Project Division, BBMP, Bangalore.
Project Name	:	Improvements building and civil works at Mallasandra Colony School in Mallasandra Ward no.13
Agency	:	Executive Engineer, KRIDL, No.80, 59th cross, 17th 'C' main road, 3rd 'Y' Block, Rajajinagar, Bangalore-560010
Customer's Reference	:	ಬಿಬಿಎಂಪಿ/ಕಾಪಾಅ/ಯೋಪಿ/ಪಿಆರ್/08/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-12-17
Sample ID No	:	2017-12-05-03/01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	06-12-17

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.2	–
2	Finess by Air permeablity method (m^2/kg, Min)	249.5	225m^2/kg, Min
3	Density (gm/cc)	3.11	–
4	Standard Consistency (%)	27.5%	Not specified
5	Initial Setting time	170 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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Samples will be disposed after 30 days from the date of issue of test certificate

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

Asst. Executive Engineer
Project Sub Division-I
Dasarahalli Zone
Brihat Bengaluru Mahanagara Palike

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-12-05-03** **Date: 03-01-18**
Customer	:	Assistant Executive Engineer, Project Division, BBMP, Bangalore.
Address	:	Project Division, BBMP, Bangalore.
Project Name	:	Improvements building and civil works at Mallasandra Colony School in Mallasandra Ward no.13
Agency	:	Executive Engineer, KRIDL, No.80, 59th cross, 17th 'C' main road, 3rd 'Y' Block, Rajajinagar, Bangalore-560010
Customer's Reference	:	ಬಿಬಿಎಂಪಿ/ಕಾಪಾಲ/ಯೋಪಿ/ಪಿಆರ್/08/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-12-17
Sample ID No	:	2017-12-05-03/01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	06-12-17

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	29.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	38.5N/mm^2	Not less than 37 N/mm^2
3	28 Days	56.5N/mm^2	Not less than 53 N/mm^2

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Project Sub Division-I
Dasarahalli Zone
Bruhat Bengaluru Mahanagara Palike

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-12-05-03** **Date: 08-12-17**
Customer	:	Assistant Executive Engineer, Project Division, BBMP, Bangalore.
Address	:	Project Division, BBMP, Bangalore.
Project Name	:	Improvements building and civil works at Mallasandra Colony School in Mallasandra Ward no.13
Agency	:	Executive Engineer, KRIDL, No.80, 59th cross, 17th 'C' main road, 3rd 'Y' Block, Rajajinagar, Bangalore-560010
Customer Reference	:	ಬಿಬಿಎಂಪಿ/ಕಾಪಾಅ/ಯೋಪಿ/ಪಿಆರ್/08/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-12-17
Sample ID No	:	2017-12-05-03/02
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	05-12-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	278	278	5.6	94.4	90-100
3	10 mm	2754	3032	60.6	39.4	25-55
4	4.75 mm	1754	4786	95.7	4.3	0-10
5	Pan	214	5000	100	0	–

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Asst. Executive Engineer
Project Sub Division-I
Dasarahalli Zone,
Bruhat Bengaluru Mahanagara Palike

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-12-05-03** **Date: 08-12-17**

Sample ID No : 2017-12-05-03/02

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.6	
3	Specific Gravity	2.69	–
4	Bulk Density(Loose) (Kg/l)	1.52	–
5	Bulk Density(Compacted) (Kg/l)	1.54	–
6	Water Absorption(%)	0.27	–
7	Aggregate crushing Value(%)	23.2	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.7	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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R KARTHIK RECHAN
Authorized Signature
Quality Manager

End of Report

Asst. Executive Engineer
Project Sub Division-I
Dasarahalli Zone,
Bruhat Bengaluru Mahanagara Palike

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

CP/TF/01

TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2017-12-05-03** **Date: 08-12-17**
Customer	:	Assistant Executive Engineer, Project Division, BBMP, Bangalore.
Address	:	Project Division, BBMP, Bangalore.
Project Name	:	Improvements building and civil works at Mallasandra Colony School in Mallasandra Ward no.13
Agency	:	Executive Engineer, KRIDL, No.80, 59th cross, 17th 'C' main road, 3rd 'Y' Block, Rajajinagar, Bangalore-560010
Customer's Reference	:	ಬಿಬಿಎಂಪಿ/ಕಾಪಾಲ/ಯೋಪಿ/ಪಿಆರ್/08/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-12-17
Sample ID No	:	2017-12-05-03/03
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	05-12-17
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	86	86	8.6	91.4	90-100	90-100	90-100	95-100
3	2.36 mm	145	231	23.1	76.9	60-95	75-100	85-100	95-100
4	1.18 mm	156	387	38.7	61.3	30-70	55-90	75-100	90-100
5	600 micron	188	575	57.5	42.5	15-34	35-59	60-79	80-100
6	300 micron	175	750	75.0	25.0	5-20	8-30	12-40	15-50
7	150 micron	162	912	91.2	8.8	0-10	0-10	0-10	0-15
8	Pan	88	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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Asst. Executive Engineer
Project Sub Division-I
Bruhat Bengaluru Mahanagara Palike

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-12-05-03** **Date: 08-12-17**

Sample ID No : 2017-12-05-03/03

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	2.4	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	7.3	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Project Sub Division-I
Dasarahalli Zone,
Bruhat Bengaluru Mahanagara Palike

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